

REMARKS

Reconsideration of presently solicited Claims 1 and 3 to 22 respectfully is requested. For the reasons indicated in detail hereafter these presently solicited claims are urged to be in condition for allowance. Applicants' contribution, particularly as presently claimed, is neither disclosed nor remotely suggested in the reasonably derived teachings of the references.

As indicated throughout the Specification, lithium ionic conductivity is enhanced particularly in the context of a lithium sulfur battery. In this context there is a deleterious tendency for lithium ions to bond to sulfur. This leads to the low availability of sulfur as an active material in electrochemical reactions and finally leads to low battery capacitance. Applicants have found through empirical research that this difficulty can be ameliorated through the inclusion of an oxalate compound of formula (1). See particularly Applicants' Specification at Page 5, lines 5 to 15, and Page 6, lines 3 to 9, as well as FIGS. 1a and 1b. Such *modus operandi* now is expressly stated in each of independent Claims 1, 19, and 21. Also, Claims 16 to 18 have been amended for consistency to specify a "lithium sulfur battery" in each instance. Support for new Claim 22 is found in Applicants' Specification at Page 6, lines 17 to 22. Such amendments are consistent with the Examiner's comment at Page 3 of the Official Action

No *prima facie* showing of obviousness is present in the different teachings of Kita and Chu et al. It is basic to the examination process that in order to establish *prima facie* obviousness of a claimed invention all of the claim limitations must be taught or suggested by the prior art. See M.P.E.P. §2143.03 in this regard. To establish *prima facie* obviousness of a claimed invention, all the claim limitations

must be taught or suggested by the prior art. *In re Royka* 490 F. 2d 981, 180 U.S.P.Q. 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2nd 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970). If an independent claims is nonobvious under 35 U.S.C. §103, then any claim which depends therefrom is patentable.

The continued rejection of presently solicited Claims 1,3, 4 and 19 under U.S.C. §103(a) over the different teachings of Japanese Patent No. 1-265-454 to Kita would be inappropriate. It takes considerably more than the teaching of the use of dimethyloxalate or diethyloxalate in a different lithium cell for a different purpose to render Applicants' specifically claimed subject matter obviously apparent to one of ordinary skill in the art. Kita teaches the use of such oxalates of formula II to react with moisture in manganese dioxide. This is not through any stretch of the imagination the concept of Applicants' specifically claimed contribution where an oxalate compound of Applicants' formula (1) in a specified concentration together with other specified components in an organic electrolyte solution of a lithium sulfur battery chelates with lithium ions and bonding between lithium ions and sulfide anions is blocked so that the solubility of sulfide ions is improved. This achievement of success through a different mechanism in the context of a lithium sulfur battery is clearly not the contribution of Kita and was not reasonably suggested by Kita. It respectfully is submitted that the Applicants' specifically defined contribution including unobvious results cannot reasonably be characterized as an "optimization" of the different teachings of Kita. The withdrawal of the rejection is in order and respectfully is requested.

Finally, the continued rejection of presently solicited Claims 5 to 18, 20 and 21 under 35 U.S.C. §103(a) over the different teachings of Kita in view of the different teachings of U.S. Patent No. 6,030,720 to Chu et al. would be lacking sound technical and legal bases. Basic deficiencies of Kita previously have been identified. A thorough reading of the Chu et al. teachings is urged to be in order. Contrary to the statements found in prior Official Actions Chu et al. in no instance teaches the inclusion of the key oxalate compound of Applicants' formula (1). For instance, it was incorrectly stated at Page 2 of the Official Action of February 23, 2006: "Chu et al. teaches a lithium-sulfur battery having an oxalate compound, e.g. dioxolane...."

It respectfully is pointed out that Applicants' oxalate compound of formula (1) is not dioxolane. Please compare Applicants' FIG. 1a and FIG. 1b to the chemical formula for dioxolane that accompanied Applicants' Response to Official Action of May 19, 2006. In view of the above, even if one skilled in the art were to faithfully consider the different teachings of the primary and secondary reference there is absolutely no suggestion to even attempt to combine their teachings in an manner that would render Applicants' specifically claimed contribution obviously apparent. The withdrawal of the rejection is urged to be in order and is respectfully requested.

A *prima facie* case of the obviousness of the presently claimed subject matter respectfully is urged to be absent in the reasonably derived teachings of the references. The mere allegation that the differences between the claimed subject matter and the prior art are obvious does not create a presumption of unpatentability. See In re Soli, 317 F.2d 941, 137 U.S.P.Q. 979 (CCPA 1963). Obviousness must be predicated on something more than it would be obvious "to try". See Ex Parte Agrabright et al., 161 U.S.P.Q. 703 (POBA 1967), and In re Mercier, 515 F.2d 1161,

185 U.S.P.Q. 774 (CCPA 1975). It is well-established law that patentability determinations of this type are contrary to the statute. See In re Antonie, 559 F.2d 618, 195 U.S.P.Q. 6 (CCPA 1977); In re Goodwin et al., 576 F.2d 375, 198 U.S.P.Q. 1 (CCPA 1978); and In re Tomlinson et al., 363 F.2d 928, 150 U.S.P.Q. 623 (CCPA 1966). The withdrawal of the rejection is urged to be in order and is respectfully requested.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By: Benton S. Duffett, Jr.

Benton S. Duffett, Jr.

Registration No. 22,030

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620